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NEWS	2	JAN 02	STN pricing information for 2008 now available
NEWS	3	JAN 16	CAS patent coverage enhanced to include exemplified prophetic substances
NEWS	4	JAN 28	USPATFULL, USPAT2, and USPATOLD enhanced with new custom IPC display formats
NEWS	5	JAN 28	MARPAT searching enhanced
NEWS	6	JAN 28	USGENE now provides USPTO sequence data within 3 days of publication
NEWS	7	JAN 28	TOXCENTER enhanced with reloaded MEDLINE segment
NEWS	8	JAN 28	MEDLINE and LMEDLINE reloaded with enhancements
NEWS	9	FEB 08	STN Express, Version 8.3, now available
NEWS	10	FEB 20	PCI now available as a replacement to DPCI
NEWS	11	FEB 25	IFIREF reloaded with enhancements
NEWS	12	FEB 25	IMSPRODUCT reloaded with enhancements
NEWS	13	FEB 29	WPINDEX/WPIDS/WPIX enhanced with ECLA and current U.S. National Patent Classification
NEWS	14	MAR 31	IFICDB, IFIPAT, and IFIUDB enhanced with new custom IPC display formats
NEWS	15	MAR 31	CAS REGISTRY enhanced with additional experimental spectra
NEWS	16	MAR 31	CA/CAplus and CASREACT patent number format for U.S. applications updated
NEWS	17	MAR 31	LPCI now available as a replacement to LDPCI
NEWS	18	MAR 31	EMBASE, EMBAL, and LEMBASE reloaded with enhancements
NEWS	19	APR 04	STN AnaVist, Version 1, to be discontinued
NEWS	20	APR 15	WPIDS, WPINDEX, and WPIX enhanced with new predefined hit display formats
NEWS	21	APR 28	EMBASE Controlled Term thesaurus enhanced
NEWS	22	APR 28	IMSRESEARCH reloaded with enhancements

NEWS EXPRESS FEBRUARY 08 CURRENT WINDOWS VERSION IS V8.3,
AND CURRENT DISCOVER FILE IS DATED 20 FEBRUARY 2008

NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS LOGIN	Welcome Banner and News Items
NEWS IPC8	For general information regarding STN implementation of IPC 8

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FILE 'HOME' ENTERED AT 12:53:02 ON 14 MAY 2008

=> e polyphenols
THIS COMMAND NOT AVAILABLE IN THE CURRENT FILE
The EXPAND command is used to look at the index in a file
which has an index.  This file does not have an index.

=> file reg
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.21       0.21

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DICTIONARY FILE UPDATES:  13 MAY 2008  HIGHEST RN 1020702-70-8

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on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=> e polyphenols
E1            1     POLYPHENOLOXIDASE/BI
E2            1     POLYPHENOLPHTHALEIN/BI
E3            0 --> POLYPHENOLS/BI
E4           22     POLYPHENON/BI
E5            1     POLYPHENOTHIAZINE/BI
E6           45     POLYPHENYL/BI
E7            2     POLYPHENYLACETYLENE/BI
E8            3     POLYPHENYLALAN/BI
E9            2     POLYPHENYLALANINE/BI
E10           3     POLYPHENYLALANYL/BI
E11           1     POLYPHENYLCARB/BI
E12           1     POLYPHENYLCARBYNE/BI

=> file caplus
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                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.46       0.67

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FILE LAST UPDATED: 13 May 2008 (20080513/ED)

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=> s polyphenols
L1       18430 POLYPHENOLS

=> s l1 and ("humulus lupulus L" "Hop bract polyphenols" "hop bitter acids")
          2017 "HUMULUS"
          1195 "LUPULUS"
       1660207 "L"
          7573 "HOP"
          5078 "HOPS"
          9953 "HOP"
                 ("HOP" OR "HOPS")
           487 "BRACT"
           891 "BRACTS"
          1175 "BRACT"
                 ("BRACT" OR "BRACTS")
         18430 "POLYPHENOLS"
          7573 "HOP"
          5078 "HOPS"
          9953 "HOP"
                 ("HOP" OR "HOPS")
         15620 "BITTER"
           483 "BITTERS"
         15784 "BITTER"
                 ("BITTER" OR "BITTERS")
       1627014 "ACIDS"
             0 "HUMULUS LUPULUS L" "HOP BRACT POLYPHENOLS" "HOP BITTER ACIDS"
                 ("HUMULUS"(W)"LUPULUS"(W)"L"(W)"HOP"(W)"BRACT"(W)"POLYPHENOLS"
                 (W)"HOP"(W)"BITTER"(W)"ACIDS")
L2           0 L1 AND ("HUMULUS LUPULUS L" "HOP BRACT POLYPHENOLS" "HOP BITTER
               ACIDS")

=> s l1 and ("humulus lupulus L" or "Hop bract" or "hop bitter acids")
          2017 "HUMULUS"
          1195 "LUPULUS"
       1660207 "L"
           224 "HUMULUS LUPULUS L"
                 ("HUMULUS"(W)"LUPULUS"(W)"L")
          7573 "HOP"
          5078 "HOPS"
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          9953 "HOP"
                 ("HOP" OR "HOPS")
           487 "BRACT"
           891 "BRACTS"
          1175 "BRACT"
                 ("BRACT" OR "BRACTS")
            23 "HOP BRACT"
                 ("HOP"(W)"BRACT")
          7573 "HOP"
          5078 "HOPS"
          9953 "HOP"
                 ("HOP" OR "HOPS")
         15620 "BITTER"
           483 "BITTERS"
         15784 "BITTER"
                 ("BITTER" OR "BITTERS")
       1627014 "ACIDS"
           141 "HOP BITTER ACIDS"
                 ("HOP"(W)"BITTER"(W)"ACIDS")
L3          31 L1 AND ("HUMULUS LUPULUS L" OR "HOP BRACT" OR "HOP BITTER ACIDS"
               )

=> d L3 20-31 ibib ab

L3   ANSWER 20 OF 31  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:        2005:462226  CAPLUS
DOCUMENT NUMBER:         143:435849
TITLE:                   Prenylflavonoids account for intriguing biological
                         activities of hops
AUTHOR(S):               de Keukeleire, D.; Heyerick, A.
CORPORATE SOURCE:        Laboratory of Pharmacognosy and Phytochemistry,
                         Faculty of Pharmaceutical Sciences, Ghent University,
                         Ghent, Belg.
SOURCE:                  Acta Horticulturae (2005), 668(Proceedings of the 1st
                         International Humulus Symposium, 2004), 175-189
                         CODEN: AHORA2; ISSN: 0567-7572
PUBLISHER:               International Society for Horticultural Science
DOCUMENT TYPE:           Journal; General Review
LANGUAGE:                English
AB   A review.  Hops (Humulus lupulus L.) prove to be a very rich source
     of prenylated hop polyphenols and derivs., which, in addition to their
     essential role in flavoring beer, account for intriguing health-beneficial
     properties as well.  Biosynthetic pathways involve acylation and
     prenylation of phloroglucinol, which also serves as a precursor to hop
     acids including humulones (alpha acids) and lupulones (beta acids).  It
     appears that mixed hydrophilic - hydrophobic properties of prenylated
     polyphenols determine biol. efficacies.  Coupling of prenyl groups delivers
     terpenes that are main constituents of hop essential oils and contribute
     greatly to a hoppy aroma.  A volatile isoprenoid alc. is held responsible
     for the sedative activity of hops.  Health aspects of humulones and
     derivs. thereof, mainly isohumulones (iso-alpha acids), as well as of
     lupulones, require close attention and varying interesting biol.
     activities have been observed  Regarding hop prenylflavonoids, most prominent
     prenylchalcones are xanthohumol (up to 1.3%, m/m) and desmethylxanthohumol
     (up to 0.2%, m/m).  Prenylchalcones can be readily converted to isomeric
     prenylflavanones, whereby xanthohumol gives rise to isoxanthohumol and
     desmethylxanthohumol furnishes a mixture of 8-prenylnaringenin and
     6-prenylnaringenin.  8-Prenylnaringenin has been shown to be the most
     potent phytoestrogen currently known, hence, desmethylxanthohumol serves
     as a pro-estrogen.  Xanthohumol exhibits an exceptionally broad spectrum
     of inhibition mechanisms at all stages of carcinogenesis, but other
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interesting biol. activities have been observed as well. It follows that levels of both prenylchalcones in hops determine significantly the value of a particular hop cultivar for medicinal purposes. It should be taken into account that different hop cultivars possess varying contents of these key compds. Furthermore, organic hops prove to be superior for production of elevated levels of prenylchalcones and, even, for a most efficient access to desmethylxanthohumol.

REFERENCE COUNT: 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 21 OF 31 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:965021 CAPLUS
DOCUMENT NUMBER: 141:384030
TITLE: Material for inhibiting enamel decalcification
INVENTOR(S): Imai, Susumu; Tagashira, Motoyuki; Kanda, Tomomasa; Nishizawa, Toshiki; Hanada, Nobuhiro
PATENT ASSIGNEE(S): Asahi Breweries Ltd., Japan
SOURCE: PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004096165	A1	20041111	WO 2004-JP6465	20040430
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2004233706	A1	20041111	AU 2004-233706	20040430
CA 2524087	A1	20041111	CA 2004-2524087	20040430
EP 1621081	A1	20060201	EP 2004-730741	20040430
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
CN 1780604	A	20060531	CN 2004-80011641	20040430
KR 810946	B1	20080310	KR 2005-720598	20051028
US 20060216248	A1	20060928	US 2005-554932	20051031
US 20080003186	A1	20080103	US 2007-773240	20070703

PRIORITY APPLN. INFO.:			
JP 2003-124725	A	20030430	
WO 2004-JP6465	W	20040430	
US 2005-554932	A3	20051031	

AB It is intended to provide an effective cariostatic material which inhibits dental plaque formation as well as onset of dental caries. A material for inhibiting enamel decalcification containing, as the active ingredient, a proanthocyanidin-like polyphenol originating in hop bract or immature apple, which effectively inhibits not only dental plaque formation but also the dental caries process including proliferation of bacteria, formation of acids by the bacteria and enamel decalcification. Also, foods, drinks and oral care goods with the use of the above substance as an enamel decalcification inhibitor are provided. An enamel decalcification inhibitor was prepared from immature apple fruit extract The obtained enamel decalcification inhibitor was combined at 0.005 % with

other ingredients to 100 % to give a tooth paste.
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 22 OF 31 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:75999 CAPLUS
DOCUMENT NUMBER: 140:92972
TITLE: Device for solid phase extraction of polyphenols and bitter acids for beer analysis
INVENTOR(S): Nitzsche, Frank; Harms, Diedrich; Offer, Guido
PATENT ASSIGNEE(S): Germany
SOURCE: Ger. Offen., 6 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10233077	A1	20040129	DE 2002-10233077	20020719

PRIORITY APPLN. INFO.: DE 2002-10233077 20020719
AB A device for the solid phase extraction of polyphenols consists of a carrier system which is contacted with the fluid to be analyzed to selectively bind the compds. of interest. The extracted analyte is reacted with an anal. reagent, especially salts of Dy, Sm, Eu, or Tb, to form complexes which are subsequently analyzed by UV-Vis spectroscopy, fluorometry, mass spectrometry, or by electrochem. detection. The carrier system contains functional group-specific sorbing or reactive particles, especially derivs. of inorg. oxides, such as silica, alumina, titania, or zirconia, and a macrocyclic ligand covalently bound to the oxide. The particles can be directly applied onto an inert carrier or homogeneously distributed in a porous matrix. The porous matrix can consist of polyolefins, low-d. polyethylene, low-d. polypropylene, silicones, e.g. polydimethylsiloxane, polyacrylonitrile, PTFE, poly(p-phenyleneterephthylamide), poly(m-phenyleneterephthylamide), or regenerated cellulose. The inert carrier can be a transparent capillary made of glass or quartz, or a inert polymer strip for use as a test strip. A polar solvent or solvent mixture, such as methanol, ethanol, propanol, isopropanol, acetone, DMSO, or their mixts. with water, can be used to eluate the analyte from the carrier system. The device is especially useful for the anal. of beer, or hop bitter acids.

L3 ANSWER 23 OF 31 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:842054 CAPLUS
DOCUMENT NUMBER: 135:370939
TITLE: Lipase inhibitors from hop and foods containing them
INVENTOR(S): Kaneko, Maki
PATENT ASSIGNEE(S): Asahi Breweries, Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001321166	A	20011120	JP 2000-144639	20000517

PRIORITY APPLN. INFO.: JP 2000-144639 20000517
AB Polyphenol compds., which are contained in hop and adsorbed by synthetic

resin gel, are useful as lipase inhibitors. Antiobesity foods containing the inhibitors are also claimed. Hot aqueous EtOH extract of hop bracts was passed through a Sepabeads 825 (styrene-divinylbenzene copolymer). The column was eluted with 80% EtOH and the eluted fraction was freeze-dried to give lipase inhibitor. The inhibitor was further purified by ultrafiltration to give a product containing 40.6% catechins. Tablets, capsules, candies, etc. containing the inhibitor were also manufactured

L3 ANSWER 24 OF 31 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:738369 CAPLUS
DOCUMENT NUMBER: 135:290147
TITLE: Hop-derived natural colorants
INVENTOR(S): Tagashira, Motoyuki
PATENT ASSIGNEE(S): Asahi Breweries, Ltd, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001279125	A	20011010	JP 2000-93725	20000330

PRIORITY APPLN. INFO.: JP 2000-93725 20000330
AB The colorants are polyphenols from hop cones and hop bracts which can be extracted by acid or alkali hydrolysis in the presence of heavy metal ions (Fe, Co, Ni, Cu, Zn and Mn) and are useful for beverage, cosmetics and dyes. Thus, heating 20 g ground hop cone with 10 mg FeCl2 in 1 L 0.05M HCl while stirring at 95° for 40 min and filtering gave a red colorant.

L3 ANSWER 25 OF 31 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:524309 CAPLUS
TITLE: Inhibition by hop bract polyphenols of cellular adherence and water-insoluble glucan synthesis of mutans streptococci.
AUTHOR(S): Tagashira, M.; Uchiyama, K.; Yoshimura, T.; Shirota, M.; Uemitsu, N.
CORPORATE SOURCE: Bioscience Research and Development Laboratory, Asahi Breweries, Ltd., Ibaraki, 302-0106, Japan
SOURCE: Book of Abstracts, 216th ACS National Meeting, Boston, August 23-27 (1998), AGRO-041. American Chemical Society: Washington, D. C.
CODEN: 66KYA2
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English
AB The inhibitory effect of hop bract polyphenols (HBP) on cariogenic streptococci was investigated. It was found that the high mol. weight polyphenol (estimated about 36,000-40,000) inhibited the cellular adherence of Streptococcus mutans MT8148 (serotype C) and Streptococcus sobrinus ATCC 33478 (serotype g) at much smallar concns. than the polyphenols extracted from oolong tea or green tea leaves. Furthermore, HBP also inhibited the action of glucosyltransferase, which was involved in the water-insol. glucan synthesis, but did not suppress the growth and the acid production of the bacteria. These results suggest that HBP would be a candidate to act against dental caries caused by Mutans Streptococci.

L3 ANSWER 26 OF 31 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:166027 CAPLUS
DOCUMENT NUMBER: 126:261436

TITLE: Inhibition by hop bract polyphenols of cellular adherence and water-insoluble glucan synthesis of mutans streptococci
AUTHOR(S): Tagashira, Motoyuki; Uchiyama, Keiko; Yoshimura, Tomoaki; Shirota, Masayuki; Uemitsu, Nobuo
CORPORATE SOURCE: Bioscience Res. Development Lab., Asahi Breweries Ltd., Tokjyo, 143, Japan
SOURCE: Bioscience, Biotechnology, and Biochemistry (1997), 61(2), 332-335
CODEN: BBBIEJ; ISSN: 0916-8451
PUBLISHER: Japan Society for Bioscience, Biotechnology, and Agrochemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The inhibitory effect of hop bract polyphenols (HBP) on cariogenic streptococci was investigated. The high mol. weight polyphenol (estimated 36,-000-40,000) inhibited the cellular adherence of Streptococcus mutans MT8148 (serotype C) and Streptococcus sobrinus ATCC 33478 (serotype g) at much smaller concns. than the polyphenols extracted from oolong tea or green tea leaves. HBP also inhibited the action of glucosyltransferase, which was involved in the water-insol. glucan synthesis, but did not suppress the growth and the acid production of the bacteria. These results suggest that HBP would be a candidate to act against dental-caries caused by mutans streptococci.

L3 ANSWER 27 OF 31 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:138832 CAPLUS
DOCUMENT NUMBER: 122:54303
ORIGINAL REFERENCE NO.: 122:10541a,10544a
TITLE: Novel methodology for unambiguous identification of hop varieties
AUTHOR(S): De Keukeleire, D.; De Cooman, L.; Everaert, E.; Sandra, P.; Vindevogel, J.; Szucs, R.
CORPORATE SOURCE: Faculty of Pharmaceutical Sciences, University of Gent, Ghent, Belg.
SOURCE: Proceedings of the Convention - Institute of Brewing (Asia Pacific Section) (1994), 23rd, 129-32
CODEN: IBAZA2; ISSN: 0367-6897
PUBLISHER: Winetitles
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A novel methodol. for unambiguous hop cultivar identification involves interpretation by multivariate anal. techniques of data assembled from quant. anal. of important chemotaxonomic markers. Essentially, 3 series of constituents, bitter acids, essential oil components, and polyphenols, were investigated. Prior to anal., each of these series is extracted selectively from 3 hop cultivars, Saaz, Wye Target, and Nugget. The hop bitter acids provide relatively little information that could be useful for distinguishing the cultivars. Furthermore, the ratios of the adhumulones and the adlupulones, which were obtained for the 1st time, are very similar. Detailed insight of the composition of the essential oils allows straightforward distinction. Principal component anal. of quant. data of the hop essential oil as well as of the hop polyphenols leads to unequivocal identification of the 3 cultivars. It is envisaged that manipulation of all combined data will be needed to identify many different hop cultivars by the content of chemical markers.

L3 ANSWER 28 OF 31 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1994:481159 CAPLUS
DOCUMENT NUMBER: 121:81159
ORIGINAL REFERENCE NO.: 121:14583a,14586a

TITLE: The effects of hops on flavor stability and beer properties
AUTHOR(S): De Keukeleire, Denis
CORPORATE SOURCE: Fac. Pharm. Sci., Univ. Gent, Ghent, 9000, Belg.
SOURCE: Cerevisia and Biotechnology (1993), 18(4), 33-46
CODEN: CERBE8; ISSN: 0778-2640
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 41 refs. The brewing value and the flavor characteristics of hops are due to the presence of resins, essential oil and polyphenols. While transformations of α-acids during the boiling of wort with hops in the brewery cause development of the bitter taste, the essential oil and the volatile degradation products of the hop bitter acids determine mainly the hop character of beer. The inherent flavor instability is due to the complexity of the flavor pattern and the reactivity of various constituents. It is therefore suggested to use trans iso-α-acids as bittering agents and to apply hydrogenation for removal of the reactive double bonds in the hop components.

L3 ANSWER 29 OF 31 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1990:176944 CAPLUS
DOCUMENT NUMBER: 112:176944
ORIGINAL REFERENCE NO.: 112:29911a,29914a
TITLE: Biochemical identification of hop (Humulus lupulus) cultivars, hop pellets, and barley (Hordeum vulgare) by means of RP-HPLC flavonoid fingerprints
AUTHOR(S): Van Sumere, C. F.; Everaert, E.; Vande Casteele, K.; De Cooman, L.; Fache, P.; Saey, L.
CORPORATE SOURCE: Lab. Plantenbiochem., Rijksuniv. Gent, Ghent, 9000, Belg.
SOURCE: Cerevisia (1976-1990) (1989), 14(3), 147-56
CODEN: CRVSDX; ISSN: 0377-8266
DOCUMENT TYPE: Journal
LANGUAGE: Dutch
AB Reverse-phase HPLC (LiChrospher 100 CH-18 column; combined isocratic and gradient elution; UV and visible detection) was used to characterize flavonoids and α- and β-bitter acids in hops (or hop pellets) and polyphenols in barley chaff. The data may be used to authenticate samples of hops and barley in the brewing industry when combined with a computerized reference system. Application of the techniques to ornamental plants (e.g. rose cultivars) is also briefly documented.

L3 ANSWER 30 OF 31 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1987:3758 CAPLUS
DOCUMENT NUMBER: 106:3758
ORIGINAL REFERENCE NO.: 106:731a,734a
TITLE: Effect of hops on the brewing process and beer quality
AUTHOR(S): Melet'ev, A. E.; Mikhnenko, T. A.; Semenova, T. I.
CORPORATE SOURCE: KTIPP, USSR
SOURCE: Fermentnaya i Spirtovaya Promyshlennost (1986), (5), 6-8
CODEN: FSPMAM; ISSN: 0367-3197
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The organoleptic properties of beer and wort are influenced by the components of hops, particularly α-bitter acids, isohumulones, and polyphenols. The most critical component, is polyphenol, which enhances the precipitation of high-mol-weight nitrogenous substances upon addition of Mg(SO4)2.
The optimal concns. of polyphenol in hops and wort are 4.5% and 100-300 mg/L, resp.

L3 ANSWER 31 OF 31 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1985:165176 CAPLUS
DOCUMENT NUMBER: 102:165176
ORIGINAL REFERENCE NO.: 102:25959a,25962a
TITLE: A novel approach to the analysis of hop bitter acids in brewing
AUTHOR(S): De la Vega, P.; Batoon, E.
CORPORATE SOURCE: San Miguel Corp., Manila, Philippines
SOURCE: Proceedings of the Convention - Institute of Brewing (Asia Pacific Section) (1985), Volume Date 1984, 18th, 218-22
CODEN: IBAZA2; ISSN: 0367-6897
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A laboratory technique that ensures a rapid enrichment and quant. recovery of hop bitter acids in wort and beer, prior to chromatog. anal., was developed. Hop bitter acids and polyphenols were selectively absorbed onto a C18-bonded silica cartridge and were sequentially desorbed with 90:10:0.25 MeOH-H2O-H3PO4. Determination of bitter acids was subsequently accomplished by HPLC, using an assayed solution of isomerized hop extract as external standard This method gave reproducible results and allowed the anal. of 50 samples/day. Investigations using this new approach provided accurate information on the changes that bitter acids undergo during brewing and beer processing.

=> FIL STNGUIDE

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	74.52	75.19

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-9.60	-9.60

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DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-9.60

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FILE LAST UPDATED: 13 May 2008 (20080513/ED)

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=> d his

     (FILE 'HOME' ENTERED AT 12:53:02 ON 14 MAY 2008)

     FILE 'REGISTRY' ENTERED AT 12:53:28 ON 14 MAY 2008
               E POLYPHENOLS

     FILE 'CAPLUS' ENTERED AT 12:53:48 ON 14 MAY 2008
L1         18430 S POLYPHENOLS
L2             0 S L1 AND ("HUMULUS LUPULUS L" "HOP BRACT POLYPHENOLS" "HOP BITT
L3            31 S L1 AND ("HUMULUS LUPULUS L" OR "HOP BRACT" OR "HOP BITTER ACI

     FILE 'STNGUIDE' ENTERED AT 12:55:47 ON 14 MAY 2008

     FILE 'CAPLUS' ENTERED AT 13:00:41 ON 14 MAY 2008

=> L1 and "aqueous alcohol"
L1 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s L1 and "aqueous alcohol"
        196324 "AQUEOUS"
             1 "AQUEOUSES"
        196325 "AQUEOUS"
                 ("AQUEOUS" OR "AQUEOUSES")
       1116633 "AQ"
           194 "AQS"
       1116751 "AQ"
                 ("AQ" OR "AQS")
       1163052 "AQUEOUS"
                 ("AQUEOUS" OR "AQ")
        285819 "ALCOHOL"
        182530 "ALCOHOLS"
        433170 "ALCOHOL"
                 ("ALCOHOL" OR "ALCOHOLS")
        612972 "ALC"
        197719 "ALCS"
        711727 "ALC"
                 ("ALC" OR "ALCS")
        887788 "ALCOHOL"
                 ("ALCOHOL" OR "ALC")
         14184 "AQUEOUS ALCOHOL"
                 ("AQUEOUS"(W)"ALCOHOL")
L4          27 L1 AND "AQUEOUS ALCOHOL"
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=> dup rem
ENTER L# LIST OR (END):4
4 IS NOT VALID HERE
The L-number entered has not been defined in this session, or it
has been deleted.  To see the L-numbers currently defined in this
session, enter DISPLAY HISTORY at an arrow prompt (=>).

=> S L4 1-27 ibib ab
MISSING OPERATOR L4 1-27
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> d his

     (FILE 'HOME' ENTERED AT 12:53:02 ON 14 MAY 2008)

     FILE 'REGISTRY' ENTERED AT 12:53:28 ON 14 MAY 2008
               E POLYPHENOLS

     FILE 'CAPLUS' ENTERED AT 12:53:48 ON 14 MAY 2008
L1         18430 S POLYPHENOLS
L2             0 S L1 AND ("HUMULUS LUPULUS L" "HOP BRACT POLYPHENOLS" "HOP BITT
L3            31 S L1 AND ("HUMULUS LUPULUS L" OR "HOP BRACT" OR "HOP BITTER ACI

     FILE 'STNGUIDE' ENTERED AT 12:55:47 ON 14 MAY 2008

     FILE 'CAPLUS' ENTERED AT 13:00:41 ON 14 MAY 2008
L4            27 S L1 AND "AQUEOUS ALCOHOL"

=> d L4 1-27 ibib ab

L4   ANSWER 1 OF 27  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:         2007:505184  CAPLUS
DOCUMENT NUMBER:          146:481128
TITLE:                    Manufacture of polyphenol-containing materials from
                          citrus, and foods and beverages containing them
INVENTOR(S):              Yamaguchi, Kenji; Masuko, Mari
PATENT ASSIGNEE(S):       Pokka Corp., Japan
SOURCE:                   Jpn. Kokai Tokkyo Koho, 23pp.
                          CODEN: JKXXAF
DOCUMENT TYPE:            Patent
LANGUAGE:                 Japanese
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
     JP 2007112852         A     20070510    JP 2005-303538          20051018
PRIORITY APPLN. INFO.:                       JP 2005-303538          20051018
AB   The materials, useful for foods and beverages, are manufactured by immersion of
     citrus fruits or their constituents in solvents for extraction, addition of
     bentonite to solns. containing the exts., and removal of bentonite from the
     solns.  The manufacturing process may also involve further purification steps
     including adsorption with adsorbent resins, washing of the adsorbent
     resins with H2O or aq. alc. solns., and elution of polyphenols from
     the adsorbent resins.  Food materials with high content of polyphenols
     and low content of components causing quality deterioration are manufactured

L4   ANSWER 2 OF 27  CAPLUS  COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:         2006:848276  CAPLUS
```

DOCUMENT NUMBER: 145:235739
TITLE: Oral formulation containing polyphenols from Cistus incanus extracts
PATENT ASSIGNEE(S): ICB Investment Consulting und Beteiligungen G.m.b.H., Austria
SOURCE: Ger. Gebrauchsmusterschrift, 4pp.
CODEN: GGXXFR
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 202006004872	U1	20060824	DE 2006-202006004872	20060328

PRIORITY APPLN. INFO.: DE 2006-202006003957IA 20060310

AB The invention concerns oral dosage forms of polyphenol-containing Cistus incanus exts. in combination with Vitamin E. Typically 80 mg polyphenol-containing Cistus flower or sprout extract and 2 mg Vitamin E are included in capsules, dragees, or tablets; other vitamins and minerals can be added. Dried plant material is extracted with aq. alc., concentrated in vacuum and sorbed on a solid phase.

L4 ANSWER 3 OF 27 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2006:182143 CAPLUS
DOCUMENT NUMBER: 144:226341
TITLE: Method for preparing hepatoprotective and hypocholesterolemic agent
INVENTOR(S): Oganesyan, E. T.; Parkhomenko, A. Yu.; Andreeva, O. A.; Dorkina, E. G.; Agadzhanyan, Z. S.; Paukova, E. O.
PATENT ASSIGNEE(S): Pyatigorskaya Gosudarstvennaya Farmatsevticheskaya Akademiya, Russia
SOURCE: Russ., 11 pp.
CODEN: RUXXE7
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2270686	C2	20060227	RU 2004-109481	20040329

PRIORITY APPLN. INFO.: RU 2004-109481 20040329

AB The invention relates to a method for preparing the hepatoprotective and hypocholesterolemic agent. Method for preparing hepatoprotective and hypocholesterolemic agent involves using common wormwood-leaved ragweed (Ambrosia) as the parent raw gathered in the blooming phase. Raw is milled and extracted with ethanol three times under the definite conditions, exts. are combined, filtered and evaporated under vacuum. An aq.-alc. vat residue is mixed with hot water and heated to the complete removing ethanol and then purified from lipophilic substances. The prepared purified aqueous extract comprising the sum of polyphenolic compds. is divided for two equal parts. One part is evaporated to dryness and dry sum of polyphenolic compds. is prepared - fraction 1; the second part is treated sequentially with solvents being with ether firstly to isolated fraction 2 and then this part is treated with Et acetate to isolate fraction 3 followed by treatment with butanol to isolated fraction 4. For each extraction solvents are taken in the definite amount of the aqueous extract volume Extraction time is 5 min,
multiplicity is 5, settling is 5 min followed by removing solvents under vacuum up to dry residue. Method provides preparing an agent from common

wormwood-leaved ragweed (Ambrosia) possessing effective hepatoprotective and hypocholesterolemic effect.

L4 ANSWER 4 OF 27 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:1154002 CAPLUS
DOCUMENT NUMBER: 143:405038
TITLE: Complex processing of wild rose fruits for vitamin-containing nutritional supplements.
INVENTOR(S): Rubchevskaya, L. P.; Shanina, E. V.
PATENT ASSIGNEE(S): Gosudarstvennoe Obrazovatel'noe Uchrezhdenie Vysshego Professional'nogo Obrazovaniya "Sibirskii Gosudarstvennyi Tekhnologicheskii Universitet", Russia
SOURCE: Russ., 5 pp.
CODEN: RUXXE7
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2263138	C1	20051027	RU 2004-100748	20040108

PRIORITY APPLN. INFO.: RU 2004-100748 20040108
AB The invention relates to the complex processing of vitamin-containing vegetable raw materials and can be used in preparing vitamin-containing complexes and nutritional supplements. Complex treatment involves extraction of wild rose fruits with carbon dioxide and preparing a lipid-carotenoid complex and residue that is extracted with water, yielding an aqueous extract containing a vitamin-flavonoid complex and residue. Before extraction the raw material is milled to particle size 0.5 mm. Extraction of raw material with carbon dioxide is carried out under pressure 6-7 MPa and temperature 20-22°C for 3-4 h and extraction with water is carried out in the ratio residue:solvent (water) = 1:10 for 3 h. Then dried residue is extracted with 40-96% aqueous EtOH at 40-100°C for 1-3 h and an aq.-alc. extract containing biol. active substances and residue are isolated. The residue is dried and a mineral complex is obtained.

L4 ANSWER 5 OF 27 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:1130088 CAPLUS
DOCUMENT NUMBER: 142:296962
TITLE: Antioxidant activity of dulse (Palmaria palmata) extract evaluated in vitro
AUTHOR(S): Yuan, Yvonne V.; Bone, Dawn E.; Carrington, Meshell F.
CORPORATE SOURCE: School of Nutrition, Faculty of Community Services, Ryerson University, Toronto, ON, M5B 2K3, Can.
SOURCE: Food Chemistry (2005), 91(3), 485-494
CODEN: FOCHDJ; ISSN: 0308-8146
PUBLISHER: Elsevier B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Palmaria palmata (dulse) is traditionally consumed as a snack food and garnish; but, little is known about its potential as a source of antioxidants. A 1-butanol soluble fraction extracted from dulse exhibited $^{\cdot}$OH scavenging activity ± EDTA (non-site and site specific activity) in a deoxyribose assay. EC50 concns. of dulse extract to quench DPPH$^{\cdot}$ and ABTS$^{\cdot+}$ free radicals were 12.5 and 29.5 mg/mL. Dulse extract inhibited ($p < 0.05$) conjugated diene production in a linoleic acid emulsion at 24, 48 and 52 h, 38°; and inhibited ($p = 0.044$) thiobarbituric acid reactive substances (TBARS) production at 52 h. One

milligram dulse extract exhibited reducing activity = 9.68 μg L-ascorbic acid and total polyphenol content = 10.3 μg gallic acid; the dulse extract did not chelate transition metal ions. The antioxidant activity of the dulse extract was associated with aq./alc.-soluble compds. characterized by phenolic functional groups with reducing activity.

REFERENCE COUNT: 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 27 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:1081549 CAPLUS

DOCUMENT NUMBER: 142:348937

TITLE: Antioxidant properties of plumbago zeylanica, an Indian medicinal plant and its active ingredient, plumbagin

AUTHOR(S): Tilak, Jai C.; Adhikari, Soumyakanti; Devasagayam, Thomas P. A.

CORPORATE SOURCE: Radiation Biology & Health Sciences Division, Bhabha Atomic Research Centre, Mumbai, India

SOURCE: Redox Report (2004), 9(4), 219-227
CODEN: RDRPE4; ISSN: 1351-0002

PUBLISHER: Maney Publishing

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Plumbago zeylanica (known as 'Chitrak') is a useful Indian medicinal plant. The root of the plant and its constituents are credited with potential therapeutic properties including anti-atherogenic, cardiotonic, hepatoprotective and neuroprotective properties. To examine possible mechanisms of action of P. zeylanica (Chitrak), in relation to its reported beneficial properties, antioxidant effects of the aq./alc. exts. of root, corresponding to medicinal prepns., and the active ingredient, plumbagin, were studied. Methods used included: ferric reducing/antioxidant power (FRAP), radical scavenging of 1,1-diphenyl-2-picryl hydrazyl (DPPH) and 2,2'-azobis-3-ethylbenzthiazoline-6-sulfonic acid (ABTS), lipid peroxidn. in rat liver mitochondria induced by different agents, and estimating phenolic and flavonoid content. In FRAP/DPPH assays, boiled ethanolic exts. were the most effective, while in the ABTS assay boiled aqueous exts. were the most efficient. These exts. also significantly inhibited lipid peroxidn. induced by cumene hydroperoxide, ascorbate-Fe2+ and peroxynitrite and contained high amts. of polyphenols and flavonoids. To examine the mechanisms of action in detail, antioxidant and pulse radiolysis studies with plumbagin were conducted. The hydroxyl (.OH), alkyl peroxyl (CCl3OO.), linoleic acid peroxyl (LOO.), and glutathiyl (GS.) radicals generate a phenoxyl radical upon reaction with plumbagin. The bimol. rate consts. were: .OH, 2.03 × 109 dm3mol-1s-1; CCl3OO., 1.1 × 109 dm3mol-1s-1; LOO., 6.7 × 107 dm3mol-1s-1; and GS., 8.8 × 108 dm3mol-1s-1. In conclusion, our studies reveal that exts. of P. zeylanica and its active ingredient plumbagin have significant antioxidant abilities that may possibly explain some of the reported therapeutic effects.

REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 27 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:515517 CAPLUS

DOCUMENT NUMBER: 141:33848

TITLE: Process for producing hop glume polyphenols

INVENTOR(S): Tagashira, Motoyuki; Kanda, Tomomasa

PATENT ASSIGNEE(S): Asahi Breweries, Ltd., Japan

SOURCE: PCT Int. Appl., 16 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004052898	A1	20040624	WO 2003-JP15959	20031212
W: AU, CN, JP, US				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR				
AU 2003289063	A1	20040630	AU 2003-289063	20031212
AU 2003289063	B2	20071018		
EP 1577315	A1	20050921	EP 2003-778886	20031212
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, LT, LV, FI, MK, CY, AL, TR, BG, CZ, EE, SK				
CN 1726221	A	20060125	CN 2003-80105813	20031212
US 20060251760	A1	20061109	US 2005-538790	20050610

PRIORITY APPLN. INFO.: JP 2002-360424 A 20021212
WO 2003-JP15959 W 20031212

AB This invention provides a process for efficiently producing highly purified hop glume polyphenols using hop glume as the starting material; food, drinks, cosmetics and drugs containing hop glume polyphenol are disclosed. Namely, a process for producing hop polyphenols comprises extracting hop glume with an aq. alc. solution, concentrating the extract to give a residual alc. concentration of 0.5 to 2% and then centrifuging and/or filtering the concentrate Formulations containing hop glume polyphenols are given.

L4 ANSWER 8 OF 27 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:409947 CAPLUS
DOCUMENT NUMBER: 140:390674
TITLE: Black rice ingredients and extracts for inhibition of increase in human blood sugar level and their use for prevention of diabetes and diet foods and beverages
INVENTOR(S): Tsuboi, Makoto; Aitani, Norio; Okada, Tadashi; Murai, Hiromichi
PATENT ASSIGNEE(S): Oriza Yuka K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004143130	A	20040520	JP 2002-349142	20021025

PRIORITY APPLN. INFO.: JP 2002-349142 20021025

AB Black rice polyphenols, anthocyanins, and aq. alc. exts. are useful for inhibition of increase in human blood sugar level. Thus. aqueous EtOH extract of the rice suppressed the rise in blood sugar level after diet in volunteers.

L4 ANSWER 9 OF 27 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2004:249625 CAPLUS
DOCUMENT NUMBER: 140:276146
TITLE: Sugar-uptake inhibitors, antidiabetic compositions, and dietary foods and beverages containing ingredients of black rice
INVENTOR(S): Tsuboi, Makoto; Aitani, Norio; Sugishita, Tomoko;

Okada, Tadashi; Murai, Hiromichi
PATENT ASSIGNEE(S): Oriza Yuka K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004091462	A	20040325	JP 2002-296748	20020902

PRIORITY APPLN. INFO.: JP 2002-296748 20020902

AB Title inhibitors, compns., and foods, useful for prevention of diabetes and obesity, contain polyphenols, anthocyanin, α-glucosidase inhibitors, α-amylase inhibitors, sucrose-uptake inhibitors, or starch-uptake inhibitors of black rice, or its aq. alc. extract Thus, black rice extract at 3.0 mg/mL inhibited α-amylase and α-glucosidase by 100% and 90.59%, resp.

L4 ANSWER 10 OF 27 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2003:417503 CAPLUS
DOCUMENT NUMBER: 138:406580
TITLE: Use of reed or its ingredients in the form of extracts for cosmetic formulations
INVENTOR(S): Aguadish, Louis Michel Jacques; Mane, Jean Maurice Eugene; Berthon, Jean Yves Antonin
PATENT ASSIGNEE(S): Greentech S. A., Fr.; V Mane Fils
SOURCE: Fr. Demande, 17 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2832631	A1	20030530	FR 2001-15405	20011127
FR 2832631	B1	20040618		

PRIORITY APPLN. INFO.: FR 2001-15405 20011127

AB The present invention relates to the use of the reed (Reeds communis), (Acorus calamus), (Arundo dorax) or (Cordyline terminalis) in the form of aq., alc., acetone, hydroalcoholic, hydroglycolic, glycolic or oil exts. for the preparation of cosmetic formulations (skin, body, hair), presenting local slimming properties by reduction in the lipidic load of the s.c. adipocytes, characterized by the presence of inhibiting cAMP phosphodiesterase inhibitors (adenosine 3':5'monophosphate cyclic phosphodiesterase) and activators of the adenylate cyclase, presenting antiradical properties, slowing down cellular ageing due to the presence of polyphenols and flavonoids, presenting by the presence of polysaccharides and free sugars such as saccharose, presenting immunomodulating properties by the presence of polysaccharides, inhibiting epidermal and dermal ageing due to the presence of specific polysaccharides such as arabinoglucans, vitamin C and organic acids, presenting detoxifying properties naturally recognized for the reed in its environment, due to the presence of flavonoids and polyphenols allowing the complexation and the elimination of heavy metals and aggressive pollutants on the skin, presenting refreshing and invigorating properties naturally recognized for the reed, due to the presence of polysaccharides, saccharose and vitamin C (ascorbic acid), rejuvenating properties for epidermis, dermis and hair.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 11 OF 27 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2002:834248 CAPLUS
DOCUMENT NUMBER: 138:169782
TITLE: 2D NMR analysis for unambiguous structural elucidation of phenolic compounds formed through reaction between (+)-catechin and glyoxylic acid
AUTHOR(S): Es-Safi, Nour-Eddine; Le Guerneve, Christine; Cheynier, Veronique; Moutounet, Michel
CORPORATE SOURCE: UMR Sciences Pour l'OEnologie, INRA, Montpellier, 34060, Fr.
SOURCE: Magnetic Resonance in Chemistry (2002), 40(11), 693-704
CODEN: MRCHEG; ISSN: 0749-1581
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Various phenolic compds. were synthesized in an aq.-alc. solution containing (+)-catechin and glyoxylic acid which was used as a model of fruit-derived food browning that usually occurs during aging. After purification by semi-preparative HPLC, the isolated compds. were subjected to homo- and heteronuclear proton and carbon NMR anal. including COSY, TOCSY, ROESY, HSQC and HMBC techniques. These expts. allowed the structural elucidation and complete 1H and 13C NMR assignment of the isolated compds. The strategies followed for the assignment of all proton and carbon resonances in addition to the linkage site determination are discussed.
REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 12 OF 27 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:764505 CAPLUS
DOCUMENT NUMBER: 135:282416
TITLE: Device for IR or near-IR spectrophotometric analysis of body fluids or aqueous alcoholic fluids
INVENTOR(S): Therry, Francis; Leboeuf, Jean Pierre
PATENT ASSIGNEE(S): Cetim, Fr.
SOURCE: Fr. Demande, 16 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2803660	A1	20010713	FR 2000-202	20000107
FR 2803660	B1	20020405		
PRIORITY APPLN. INFO.:			FR 2000-202	20000107

AB The apparatus for the spectrophotometric anal. of fluids consists of a spectrophotometer, and a sampling unit featuring a syringe, a three-way valve, and a motorized piston. The valve connects to the syringe, to the reservoir of sample being analyzed, and to a tube that leads to the optical cell in the spectrophotometer. The device is equipped with a Peltier-effect-type thermostat to control the temperature Two elec. valves are integrated before and behind the optical cell to immobilize the sample. A computer analyzes the data obtained from calibration measurements and measurements of the actual sample. The method is based on IR and near-IR spectroscopy. Preferentially, body fluids such as blood or aq. alc. fluids (e.g., wine) are analyzed.

L4 ANSWER 13 OF 27 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:289933 CAPLUS
DOCUMENT NUMBER: 134:300615
TITLE: Stable cosmetic compositions containing polyphenols and amino carboxylic acids
INVENTOR(S): Tajima, Masaru; Omoto, Tsunetaka
PATENT ASSIGNEE(S): Lion Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001114651	A	20010424	JP 1999-295416	19991018

PRIORITY APPLN. INFO.: JP 1999-295416 19991018

AB The compns., which are free from discoloration or crystallization during storage, contain polyphenols and monoamino monocarboxylic acids dissolved in solvents comprising 15:85-95:5 weight ratio of C2-4 alcs. and H2O. A spray-type hair treatment composition was prepared from Pr gallate 1.0, glycine 1.0, silk hydrolyzate 2.0, hydroxyethyl chitosan 1.5, poly(vinylpyrrolidone) 0.5, polyoxyethylene hydrogenated castor oil 0.5, cetyltrimethylammonium chloride 0.5, dihydroxybenzophenone 0.1, methylparaben 0.1, citric acid, Na citrate, perfume 0.2, EtOH 35.0, and H2O to 100.0%.

L4 ANSWER 14 OF 27 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:251182 CAPLUS
DOCUMENT NUMBER: 135:2977
TITLE: Polyphenolic metabolites of the flowers of Tamarix tetragyna
AUTHOR(S): El-Mousallami, Amani M. D.; Hussein, Sahar A. M.; Nawwar, Mahmoud A. M.
CORPORATE SOURCE: Department of Chemistry, Faculty of Science, Zagazig University, Zagazig, Egypt
SOURCE: Natural Product Sciences (2000), 6(4), 193-198
CODEN: NPSCFB; ISSN: 1226-3907
PUBLISHER: Korean Society of Pharmacognosy
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A phytochem. study of the constitutive polyphenolics of the aq. alc. extract of Tamarix tetragyna flowers was carried out. The new sulfated flavonol quercetin 3',4'-dimethyl ether 3-O-KSO3 as well as a new natural galloyl glucose, 2-O-galloyl-(α/β)-4C1-glucopyranose, were isolated and characterized. The known sulfated flavonols, kaempferol 7,4-di-Me ether 3,5-di-O-KSO3, quercetin 7-Me ether 3,3',4'-tri-O-KSO3, quercetin 7,4'-dimethyl ether 3-O-KSO3 and quercetin 3-O-KSO3 and the known sulfated phenolics isoferulic acid 3-O-KSO3 and ellagic acid 4,4'-dimethyl ether 3-O-KSO3 were also separated and identified. The structures were established by conventional methods of anal. and confirmed by 1H-, 13C-NMR and neg. ESI-mass spectrometry. A 2D-homonuclear chemical shift correlation NMR experiment was applied for the new natural galloylglucose.

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 15 OF 27 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2000:542288 CAPLUS
DOCUMENT NUMBER: 133:131172
TITLE: Bactericides, fungicides, and insecticides containing polyphenols for plants
INVENTOR(S): Shiga, Takuo
PATENT ASSIGNEE(S): Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 2 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000219606	A	20000808	JP 1999-57521	19990128
PRIORITY APPLN. INFO.:			JP 1999-57521	19990128

AB The pesticides contain tea exts. (extracted with H2O or aq. alc.) and/or natural polyphenols, e.g. tannic acids, catechin, or flavones. Green tea polyphenol showed good antibacterial, antifungal, and insecticidal activity.

L4 ANSWER 16 OF 27 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:294406 CAPLUS
DOCUMENT NUMBER: 129:27283
TITLE: Transformations of wood resulting from the development of wood fungi during cask-stave aging
AUTHOR(S): Roulland, C.
CORPORATE SOURCE: B.N.I.C. du Cognac, Station Viticole du Bureau Natl. Interprofessionel du Cognac - 69, Cognac, F.16100, Fr.
SOURCE: Rivista Italiana EPPOS (1998), (Spec. Num.), 425-434
CODEN: RIEPD7; ISSN: 0392-0445
PUBLISHER: Rivista Italiana EPPOS
DOCUMENT TYPE: Journal
LANGUAGE: French
AB The role of microorganisms encountered in oak wood was investigated by the use of chemical and sensorial methods. These analyses were carried out on aq. alc. exts. of chips inoculated with different species. Fungi (Paecilomyces, Candida, Phialemonium, strain E) apparently do not produce the volatile substances found in cognac (furan aldehydes, lactones, volatile phenols, aromatic aldehydes), but do degrade some sugars, polyols and fatty acids, as well as gallic acid and eugenol. However certain microorganisms appear to affect the formation of some fatty acid esters. Sensorial anal. showed differences in the intensity of color and bitterness between the hydroalcoholic exts. of the control sample and those of inoculated samples. Paecilomyces seems to accentuate bitterness, while Phlalemonium seems to attenuate it.
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 17 OF 27 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1995:624378 CAPLUS
DOCUMENT NUMBER: 123:197056
TITLE: Fractionation and HPLC analysis of polyphenol compounds in Olea europea L. fruits.
AUTHOR(S): Baldi, A.; Romani, Annalisa; Mulinacci, Nadia; Alberti, M. Bambagiotti; Vincieri, F. F.
CORPORATE SOURCE: Dipartimento di Scienze Farmaceutiche, Florence, Italy
SOURCE: Bulletin de Liaison - Groupe Polyphenols (1992), 16(Pt. 2), 60-3
CODEN: BLPLAS; ISSN: 0242-8466

PUBLISHER: Groupe Polyphenols
DOCUMENT TYPE: Journal
LANGUAGE: French
AB Depitted olive fruits were frozen in liquid N and extracted with aq. alc. Following liquid-liquid fractioning, the fractions were analyzed with HPLC. Oleuropein, its degradation products, low mol.-weight polyphenols and cyanidin derivs. were found.

L4 ANSWER 18 OF 27 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1992:537658 CAPLUS
DOCUMENT NUMBER: 117:137658
ORIGINAL REFERENCE NO.: 117:23747a,23750a
TITLE: Euphorbia hirta extracts as immunostimulants
INVENTOR(S): Tamas Szenasi, Eszter
PATENT ASSIGNEE(S): Hung.
SOURCE: Ger. Offen., 5 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 4102054	A1	19920730	DE 1991-4102054	19910124

PRIORITY APPLN. INFO.: DE 1991-4102054 19910124
AB Aqueous and aq.-alc. exts. of E. hirta are immunostimulants, fungicides and wound-healing stimulants. The active principles are flavonoids, polyphenols, sterols and terpenes. E. hirta stems and leaves were extracted with water at 50° and the extract was lyophilized to give a product which affected the lectin-induced lymphoblast transformation, in vitro.

L4 ANSWER 19 OF 27 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1978:27793 CAPLUS
DOCUMENT NUMBER: 88:27793
ORIGINAL REFERENCE NO.: 88:4359a,4362a
TITLE: Total polyphenolic compounds
INVENTOR(S): Dem'yanenko, V. G.; Dranik, L. I.; Drogovoz, S. M.; Vikhtinskaya, I. L.
PATENT ASSIGNEE(S): Kharkov Scientific-Research Chemical-Pharmaceutical Institute, USSR; Kharkov State Pharmaceutical Institute
SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1977, 54(39), 15.
CODEN: URXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 577033	A1	19771025	SU 1974-2088334	19741230

PRIORITY APPLN. INFO.: SU 1974-2088334 A 19741230
AB Chicory is extracted with aq. alc., the extract is evaporated and purified with a
1:8 mixture of n-BuOH with CHCl3 to give polyphenols with cholagogue activity.

L4 ANSWER 20 OF 27 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1975:10723 CAPLUS

DOCUMENT NUMBER: 82:10723
ORIGINAL REFERENCE NO.: 82:1673a,1676a
TITLE: State of titanium oxidation in compounds formed during the reaction of titanium with polyphenols and pyrazolone derivatives
AUTHOR(S): Busev, A. I.; Solov'eva, N. G.; Akimov, V. K.
CORPORATE SOURCE: Mosk. Gos. Univ. im. Lomonosova, Moscow, USSR
SOURCE: Zhurnal Neorganicheskoi Khimii (1974), 19(10), 2704-7
CODEN: ZNOKAQ; ISSN: 0044-457X
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Aq.-alc. tetrabromo-pyrocatechol (H2L) or tribromopyrogallol (H2L') was treated with Ti(III) or Ti(IV) salts in HCl in the presence of antipyrine (Q) to give the octahedral complexes Ti(HL)LQ, Ti(HL)2LQ2, Ti(HL')L'Q3, and Ti(HL')2L'Q2. The oxidation state of Ti in these complexes was established from magnetic measurements.

L4 ANSWER 21 OF 27 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1968:86723 CAPLUS
DOCUMENT NUMBER: 68:86723
ORIGINAL REFERENCE NO.: 68:16683a,16686a
TITLE: Dependence of oxidation rates of substituted phenols on the constants of substituents
AUTHOR(S): Kirso, U.; Gubergrits, M.; Kuiv, K.
CORPORATE SOURCE: Inst. Khim., Tallinn, USSR
SOURCE: Reaktsionnaya Sposobnost Organicheskikh Soedinenii (1966), 3(3), 33-46
CODEN: RSOTAY; ISSN: 0375-9520
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The oxidation of alkyl-substituted mono- and polyphenols by mol. O at 40° in 50% aq. alc. KOH was studied. Oxidation rate consts. were calculated from the O consumption as a function of time. The additivity rule of σ consts. in the Hammett equation was tested on polysubstituted derivs. For meta and para substituents linear correlation was obtained (correlation coefficient r = 0.98, 8 compds.). When ortho substituents were included, the correlation was not so good (r = 0.87, 11 compds.). In the similar way the antioxidizing efficiency of phenols was correlated with the σ consts. New values of σ consts. -0.65 and -0.24 were suggested for ortho substituents O- and tert-Bu, resp.

L4 ANSWER 22 OF 27 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1966:63021 CAPLUS
DOCUMENT NUMBER: 64:63021
ORIGINAL REFERENCE NO.: 64:11820g-h,11821a-b
TITLE: Wine tannins. Isolation of condensed flavonoid pigments by gel filtration
AUTHOR(S): Somers, T. C.
CORPORATE SOURCE: Australian Wine Res. Inst., Glen Osmond
SOURCE: Nature (London, United Kingdom) (1966), 209(5021), 368-70
CODEN: NATUAS; ISSN: 0028-0836
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The paper reports the use of Sephadex G-25 dextran gels in both the preparation and analysis of wine tannins. Adsorptive capacity of Sephadex G-25 for wine tannins is almost completely eliminated by preparation of the gel in aq. alc. media. The procedure is rapid and gives quant. recovery. The anthocyanins present in the wine are also partially resolved. Twenty-fold-concentrated phenolic constituents from 1964 dry red wine (20 ml.) were applied to the Sephadex G-25 column. Two distinct bands were

obtained. Recovery of total phenolic material was almost 100%. The chemical nature of effluent under band I and II was revealed by paper chromatography, using BuOH-HOAc-H2O as solvent. The method thus provides a solution to the problem of sep. measurement and isolation of wine tannins. The individual anthocyanins may also be estimated fairly accurately by use of control paper chromatography. The technique has revealed that the red color of wine is due to the monomeric anthocyanin pigments only, with superimposed tannin effects producing the familiar brick-red tints of an aged wine. The changing hues and tints of a red wine are then explicable in terms of the relative contributions of polymeric and monomeric pigments to total color. The author has also used Sephadex G-50 and G-100 to analyze tannins from 1959 Shiraz red wine. Using different concns. of aq. alc. as eluting agent, the swelling capacity of the gel can be altered and hence its resolution power can also be altered. Thus, the same gel may be modified to give different performances as a mol. sieve for tannins. It is concluded that most of the condensed polyphenols in 1959 wine tannins were in the mol. weight range of 2000-5000, but some material having mol. weight up to 50,000 was also present.

L4 ANSWER 23 OF 27 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1961:108171 CAPLUS
DOCUMENT NUMBER: 55:108171
ORIGINAL REFERENCE NO.: 55:20336i,20337a-b
TITLE: Melanoids in tobacco. I. Quantitative determination of free and bound amino acids in tobacco
AUTHOR(S): Ivanov, N. G.
CORPORATE SOURCE: Central Tobacco Lab., Plovdiv
SOURCE: Bulgarski Tyutyun (1961), 6(No. 1), 29-32
CODEN: BUYYA5; ISSN: 0521-6680
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB The amino acids in fermented tobacco were determined quant. by the following method: 1 g. of dry tobacco was extracted for 8-10 hrs. with dry ether to remove the tar. The extracted tobacco was taken up with 75% aq. alc., acidified with HCl, evaporated to a small volume in vacuo over CaCl2 and NaOH and chromatographed on paper. The residual tobacco was hydrolyzed with 8 ml. 6N HCl at 105° for 48 hrs., filtered, washed, concentrated, and chromatographed on paper. The separated free amino acids in tobacco and the hydrolyzate were determined colorimetrically. Fermented tobacco contained lysine, arginine, glutamine, aspartic acid, serine, glycine, glutamic acid, threonine, tyrosine, methionine, alanine, valine, phenylalanine, leucine, and isoleucine. The amount of the acids was lower in fermented than in nonfermented tobacco, apparently due to melanoid formation by reacting with polyphenols and other hydroxy compds. during fermentation.

L4 ANSWER 24 OF 27 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1961:76136 CAPLUS
DOCUMENT NUMBER: 55:76136
ORIGINAL REFERENCE NO.: 55:14447b-h
TITLE: Flavan derivatives. IV. Teracacidin, a new leucoanthocyanidin from Acacia intertexta
AUTHOR(S): Clark-Lewis, J. W.; Katekar, G. F.; Mortimer, P. I.
CORPORATE SOURCE: Univ. Adelaide, S. Australia
SOURCE: Journal of the Chemical Society (1961) 499-503
CODEN: JCSOA9; ISSN: 0368-1769
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. CA 55, 3573f. Heartwood of A. intertexta contained a new leucoanthocyanidin (tetracacidin) found to be (-)-7,8,4'-trihydroxy-2,3-cis-flavan-3,4-cis-diol (I), an analog of melacacidin (Ia). The wood also contained a very small proportion of isoteracacidin (II), and (+)-pinitol

(III). I and III appeared to be related to each other in the same way as Ia and isomelacacidin, and the epimers thus differed only in configuration at the 4-position. From 11.5 kg. milled wood were obtained 57 g. III, m. 182-3° (aq. alc.), [α]16D 65° (c 2.8, H2O), and 32 g. mixture of I, II, and O-ethylisoteracacidin (IV). The polyphenols (92 g.) heated 2 h. at 100° with H2O and 12 cc. AcOH gave soluble material, which was converted to IV by refluxing with 1% AcOH. The filtrate refluxed 10 min. with 0.1 cc. concentrated HCl, then 10 g. Na p-toluenesulfonate.2H2O in 20 cc. H2O and 6 cc. AcOH added, and the mixture heated 0.5 h. gave 3.4 g. crude isoteracacidin p-tolyl sulfone (V), plates, m. 214° (decomposition), [α]24D -22.4°(c 1, Me2CO); tetraacetate, m. 137-8° (alc.), [α]24D -16° (c 1, Me2CO). I purified by counter-current distribution was a brown powder. Extraction with pentyl alc. of an HCl solution of I gave an orange-red anthocyanidin compared chromatog. with cyanidin and 3,3',4',7,8-pentahydroxyflavylium chloride. The anthocyanidin similarly derived from V was indistinguishable from that from I. Crude I (1.63 g.) methylated 5 h. with Me2SO4 and K2CO3 gave 0.5 g. teracacicin 4',7,8-trimethyl ether (VI), m. 159°, [α] 18D -65° (c 1, alc.). KMnO4 (0.51 g.) added gradually to 0.108 g. VI in 50 cc. Me2CO, and the mixture heated and decolorized gave 0.0121 g. p-anisic acid, m. 178°. VI (1.03 g.) oxidized with 1.5 g. KMnO4 gave 0.081 g. VI. Acidification of the Na2CO3 solution gave a residue which when methylated gave 0.25 g. Me 2-hydroxy-3,4-dimethoxybenzoate, prisms, m. 75-6°, and 0.34 g. Me anisate, m. 48-9° (ligroine). 2-Hydroxy-3,4,4'-trimethoxychalcone (5 g.) was converted into 4',7,8-trimethoxyflavonol (VII), m. 195° (AcOH), with alkaline peroxide. VII (2 g.) in 100 cc. alc. hydrogenated 24 h. at 100°/100 atmospheric over 2 g. Raney Ni (W6) gave 0.36 g. (±)-4',7,8-trimethoxy-2,3-cis-flavan-3,4-cis-diol (VIII), m. 132-3° (alc.); diacetate, leaflets, m. 158-9° (alc.); isopropylidene derivative m. 126° (MeOH). Br (0.25 g.) in 1 cc. CCl4 left 2 h. at room temperature with 0.6 g. 2-acetoxy-3,4,4'-trimethoxychalcone in 15 cc. CCl4, evaporated, and the residue refluxed 13-15 min. with 10 cc. 1:4 aqueous Me2CO gave the bromohydrin, prisms, m. 138-45°. The bromohydrin refluxed 3 min. with 8 cc. 10% Na2CO3 gave 0.15 g. dihydro-4',7,8-trimethoxyflavonol (IX), m. 172° (alc.). IX was also prepared without isolation of the bromohydrin by adding aqueous Na2CO3 to the aqueous Me2CO solution of the chalcone dibromide after the heating period. NaBH4 (0.6 g.) left 24 h. with 2 g. IX in 150 cc. MeOH gave 1.3 g. (±)-4',7,8-trimethoxy-2,3-trans-flavan-3,4-cis-diol (X), m. 83-4°, raised to 126-7° by drying; isopropylidene derivative (76%), m. 168-9° (MeOH). IX (0.2 g.) in 20 cc. MeOH hydrogenated 12 h. at 50°/70 atmospheric over 0.01 g. PtO2 gave 65% X. III m. 184-5°, [α]25D 65° (c 3, H2O). Paper chromatog. of the mixture showed that conversion of III into inositol occurred rapidly in refluxing 6N HCl, and was complete in 8 h. III (5 g.) refluxed 8 h. with 6N HCl gave 4.1 g. (+)-inositol, prisms, m. 239-40°, [α]16D 64° (c 1.2, H2O).

L4 ANSWER 25 OF 27 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1961:17908 CAPLUS
DOCUMENT NUMBER: 55:17908
ORIGINAL REFERENCE NO.: 55:3573f-i,3574a-i,3575a-b
TITLE: Flavan derivatives. III. Melacacidin and isomelacacidin from Acacia species
AUTHOR(S): Clark-Lewis, J. W.; Mortimer, P. I.
CORPORATE SOURCE: Univ. Adelaide, S. Australia
SOURCE: Journal of the Chemical Society (1960) 4106-12
CODEN: JCSOA9; ISSN: 0368-1769
DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

AB cf. CA 54, 24696d. A new leucoanthocyanidin, isomelacacidin (I), was found with its 4-epimer, melacacidin (II), in the heartwood of 3 species of Acacia. Extraction and separation of the epimers were described. II was obtained pure and crystalline I behaved as a reactive p-hydroxybenzyl alc. and readily formed an Et ether by reaction with alc.; this facilitated its separation from II. The comparative inertness of II was attributed to an unexpected conformational stability in its 2(eq), 3(ax), 4(eq)-half-chair conformation, which inhibited resonance stabilization of the 4-carbonium ion and thus reduced the benzylic character of the 4-OH group. Milled heartwood (2335 g.) of Acacia excelsa extracted 24 hrs. with Me2CO, 8 hrs. with alc., and 8 hrs. with H2O by continuous hot percolation, the 376 g. of residue obtained by concentrating the Me2CO extract stirred in 4 l. H2O, and the next day the filtrate concentrated to 600 cc. and continuously extracted with EtOAc gave (in successive 8 hrs. periods) 116 g., 8 g., and 4 g. of extractive. The alc. extract similarly treated gave 14 g. EtOAc-soluble material. The EtOAc-soluble material (142 g.) refluxed 2 hrs. with 1 l. alc. and 10 cc. AcOH converted I into O-ethylisomelacacidin (III). Evaporation to dryness in vacuo left a residue which was dissolved in 400 cc. H2O and distributed between 240 cc. EtOAc and 400 cc. H2O (on each occasion) in a counter current procedure; the EtOAc portion gave fraction A (77.7 g.). The H2O-soluble fractions were evaporated at 55° and continuously extracted with Et2O to give (in 32 hrs.) a total of 10.6 g. II and 26.6 g. of noncryst. Et2O-soluble material. Fraction A was heated on a steam bath with 400 cc. H2O and filtered from 5.2 g. dihydroflavonol. The filtrate distributed between EtOAc and H2O and the combined aqueous phases evaporated gave a residue. This residue refluxed 2.5 hrs. with 300 cc. alc. and 3 cc. AcOH, the mixture evaporated to dryness and continuously extracted with Et2O, and the product crystallized gave 7.6 g. III. The H2O-soluble portion from the alc. extract contained pipecolic acid and 4-hydroxypipecolic acid. I and II were also obtained from A. melanoxylon and A. harpophylla heartwoods; the latter appeared to be the best source for II (one specimen gave 0.6% and 1.0%, and another 0.2% yield). II and I (as III) were separated in a 50 tube counter-extraction apparatus by distribution between EtOAc and 0.067M phosphate buffer. Peak concns. were as follows: III (tube 44), II (tube 18), and I (tube 14). The crude dihydroflavonol (5.2 g.) crystallized from hot H2O as yellow flakes; further crystallization gave dihydro-(?7,8,3',4')-tetrahydroxyflavonol (IV), m. 284-5°. IV gave red colors (stable for several hrs.) when treated with aq.-alc.-HCl and Mg or Zn. HCl or alc. 3% p-MeC6H4SO3H gave a deep yellow color. Milled heartwood of A. harpophylla (2756 g.) was extracted 10 hrs. with ligroine, 67 hrs. with Et2O, and 7 hrs. with Me2CO, and the Me2CO concentrated and filtered from 5.9 g. of residue, consisting mainly of 7,8,3',4'-tetrahydroxyflavonol (V). The filtrate diluted with H2O, filtered after several days, concentrated, and extracted 24 hrs. with Et2O gave 36.2 g. of a yellow mixture of polyphenols. This in 25 cc. H2O was continuously extracted with ligroine, which dissolved 0.06 g. amorphous material and caused separation of 1.47 g. orange-red crystals of okanin (3,4,2',3',4'-pentahydroxychalcone) (VI). Recrystn. gave VI, orange needles, m. 238° (alc.); pentaacetate m. 136°. The V fraction was identified by acetylation to 3,7,8,3',4'-pentaacetoxyflavone, m. 176°, and by conversion in Me2CO with Me2SO4 and K2CO3 into 3,7,8,3',4'-pentamethoxyflavone, m. 151°. Crystalline II (0.5 g.) was dissolved in 30 cc. alc., filtered, and the filtrate concentrated to 4 cc. II (0.36 g.) crystallized rapidly (seeded) as prisms, m. 229° (decomposition), [α]16D -75° (c 0.2, alc.). II was kept 20 months in alc. without exclusion of light or air; it did not darken appreciably and was then found by chromatography to contain only II. II tetramethyl ether

crystallized in needles, m. 144-5° (alc.-Et2O), [α]25D -83.5° (c 1, alc.); tetramethyl ether diacetate m. 191-2°, [α]D -39.5° (c 0.2, alc.). II (0.02 g.) was heated with 1 cc. hot solvent and examined by paper chromatography within 0.5-1 min. and at intervals of 10, 20, 30, 60, and 90 min. II was unchanged after 1.5 hr. at 100°, but in 0.1N AcOH II was detected after 1 and 1.5 hrs. II was progressively converted by 0.5N AcOH into I (about 50% after 1 hr. and 67% after 1.5 hrs.) at 100°. Polymeric material was detected after 1 hr.; results with 0.05N HCl at 100° were similar, except that polymeric material appeared after 20 min. Less than 1% of III was formed from 0.05 g. II, 10 cc. alc., and 0.2 cc. AcOH (1.5 hrs. at the b.p.). Crude I (106 g.) refluxed 2 hrs. with 1 l. alc. and 10 cc. AcOH, evaporated, and the residue distributed between EtOAc-H2O, and the product crystallized gave 56 g. III. After dilution of its alc. solution with H2O and storage at 0° 20.4 g. III-hydrate was obtained. The anhydrous compound was obtained by drying at 90° over P2O5, [α]22D -31° (0.9% alc.). The anthocyanidin formed by heating III with 3N HCl (15 min.) was extracted with pentanol and chromatographed with Forestal solvent; it possessed the same Rf as the anthocyanidin from II and behaved similarly when sprayed with alc.-AlCl3. III (0.02 g.) was heated with 1 cc. hot solvent and then examined by paper chromatography as for II. III was slowly hydrolyzed by H2O to I about 50% during 1 hr.; in 0.1N AcOH, conversion was nearly complete in 10 min. and no other polyphenol was formed. In 0.5N AcOH, 50% conversion to I was reached in 0.5 min.; II was barely detectable after 10 min.; ther eafter it increased in concentration Considerable conversion into I occurred in 1 min. in 0.01N HCl; II was detected after 10 min. The tetramethyl ether prepared by the action of CH2N2 on III was obtained as an oil, b1 245°; p-toluenesulfonate, prisms, m. 125° (alc.), [α]23D -19° (0.04% in alc.).
The I fraction (33.5 g.) from 2.65 g. A. harpophylla heartwood refluxed 2 hrs. with 300 cc. MeOH and 10 cc. AcOH and evaporated in vacuo gave (after slow crystallization) 5.8 g. O-methylisomelacacidin (VII), plates, decomposing when
heated, [α]12D -56° (c 0.9, MeOH). The anthocyanidin formed from VII and hot 3N HCl was chromatographically identical with that obtained from II. Methylation of VII gave a product which did not crystallize nor yield a crystalline acetate or p-toluenesulfonate. III (0.371 g.) in 5 cc. 0.01N HCl kept 1 min. on the steam bath, 0.35 cc. AcOH and 0.643 g. Na p-toluenesulfinate added, the mixture heated 0.5 hr. on the steam bath, and the product crystallized gave 0.39 g. of the p-tolyl sulfone (VIII), m. 103-11°, [α]26D -25° (c 1, Me2CO);
pentaacetate m. 193°, [α]23D -13.5° (c 1, Me2CO).
With 3N HCl (15 min. on the steam bath), the sulfone gave 3,7,8,3',4'-pentahydroxyflavylium chloride. II (0.612 g.) and 10 cc. 0.01N HCl heated 20 min., 0.7 cc. AcOH and 1.27 g. Na p-toluenesulfinate-2H2O added, the mixture heated 0.5 hr., and the product isolated gave 0.347 g. VIII; acetate m. 192-3°. VIII (1 g.) kept 45 hrs. at room temperature with Et2OCH2N2 and the mixture slowly evaporated gave a gum. The product triturated with Et2O and the 0.85 g. residue crystallized gave the p-tolyl sulfone 7,8,3',4'-tetramethyl ether, [α]25D -44° (c 1, Me2CO), m. 119-22° (MeOH). This compound was also prepared by methylation of 1.5 g. of the sulfone with CH2N2, evaporation of the Et2O, and acetylation of the residue at room temperature (14 hrs.).

L4 ANSWER 26 OF 27 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1957:72255 CAPLUS
DOCUMENT NUMBER: 51:72255
ORIGINAL REFERENCE NO.: 51:13076h-i,13077a-c
TITLE: Investigations on the status of simple and high molecular polyphenols in the plant cell
AUTHOR(S): Lang, W.

CORPORATE SOURCE: Katherinenhosp., Stuttgart, Germany
SOURCE: Planta Med. (1956), 4, 33-40
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Includes a review with 10 references. By precipitation of high-mol.-weight polyphenols (= tannins) with basic Zn(AcO)2 (I), the low-mol.-weight glycosidal polyphenols can be determined quantitatively by means of the persistent yellow color developed with I (calculated as rutin). In aq.-alc. mixts., tannin-protein adsorbates show increased solubility with increasing alc. concns. in the case of good proteins combinations, but with protein-poor prepns. a greater solubility in cold water is noted. Increasing the maceration time in water of tannin-proteins gave increased solubility in added alc., showing the need or utility of maceration before the extraction of drugs. 60-70% of the total extractable tannin (II) of Bergenia saxifraga leaves is water-soluble (representing unbound or free tannin (III) which occurs in the cell sap); II is alc.-soluble, while the difference between II and III represents the adsorptively bound tannin. On drying B. saxifraga leaves, only a slight lowering of III occurs with full extraction of II, but with other tannin leaves, such as those of walnut and sumac, considerable decreases of II (up to 30% reduction) occur, resulting entirely from loss of III. In low concns. of alc., a slow decrease in II occurs (which may result from continuing oxidation and condensation of tannin through the action of peroxidases soluble at this concentration); with higher concns., no change occurs. Practical applications are shown of premaceration and solvent concentration to the respective objectives of low and high-tannin contents in the finished product.

L4 ANSWER 27 OF 27 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1955:18292 CAPLUS
DOCUMENT NUMBER: 49:18292
ORIGINAL REFERENCE NO.: 49:3563e-h
TITLE: Tannin extracts as raw materials for the adhesives and resins industries
AUTHOR(S): Knowles, E.; White, T.
SOURCE: Adhesives & Resins (1954), 2, 226-30
CODEN: ADRSAQ; ISSN: 0515-4138
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Vegetable tannin extract is a valuable source of polyphenolic compds., some of which are in demand in the manufacture of synthetic resins and adhesives. The hydrolyzable tannins hydrolyze to relatively simple, nonresin-forming compds. The condensed tannins (I) are complex mixts. of polyphenols which react with acids to form the basis for phenolic resins when treated with HCHO. Common I exts. include wattle (II) and quebracho (III). The basic structural unit of I consists of resorcinol or phloroglucinol groups connected by short aliphatic chains to a similar number of catechol or pyrogallol nuclei. III reacts like a mixture of 50% resorcinol and 50% pyrogallol and can be used in single-stage molding powders consisting of III, paraformaldehyde, and plasticizers. I can also be used to catalyze other resin-forming reactions. Thus, 35.6% III, 6.7% phenol, 6% paraformaldehyde, 49.8% wood flour, and 1.5% tritolyl phosphate can be molded at 250°F. III is both catalyst and reactant. Sawdust can be bonded with a mixture of urea, III, and paraformaldehyde to form strong and durable tile. Either II or III can be refluxed with HCHO in aq. alc. to give a soluble resol which, when precipitated by H2O and dried, becomes a stable molding powder or adhesive. The resol is soluble in aqueous acetone or alc. A boilproof adhesive results from a mixture of 1 part resol. 3 parts III, and acid or alkali catalyst. At pH 9.5 pressing temps. can be as low

as 90°C., and large amts. of fillers can be incorporated without significant loss of strength